

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

EDWARDS LIFESCIENCES AG and)
EDWARDS LIFESCIENCES LLC,)
)
Plaintiffs,)
)
v.)
)
COREVALVE, INC. and,)
MEDTRONIC COREVALVE, LLC)
)
Defendants.)
_____)

C.A. No. 08-91-GMS

MEMORANDUM

I. INTRODUCTION

In this patent infringement action, plaintiffs Edwards Lifesciences AG and Edwards Lifesciences LLC (collectively, “Edwards” or “the plaintiffs”) allege that a medical device manufactured by defendants CoreValve, Inc. and Medtronic CoreValve, LLC (“CoreValve”) infringe the asserted claim of the patent-in-suit. (D.I. 1.) The court held an eight-day jury trial in this matter on March 23 through April 1, 2010. (D.I. 326-333.) At trial, CoreValve properly moved for judgment as a matter of law (“JMOL”) on a number of grounds pursuant to Rule 50(a) of the Federal Rules of Civil Procedure (see D.I. 303-304, 308, and 310), and the court denied CoreValve’s motions. (See Tr. 1264-70.)

On April 1, 2010, the jury returned a unanimous verdict in favor of Edwards on all claims. The jury found that CoreValve’s Generation 3 ReValving System (the “Gen 3” device) directly infringed claim 1 of United States Patent No. 5,411,552 (“the ‘552 Patent”), the only asserted claim in this case. (D.I. 313.) The jury further found that CoreValve’s infringement was willful, and rejected CoreValve’s claim of non-enablement with respect to the asserted

claim. (Id.) The jury awarded Edwards \$72,645,555 in lost profits and \$1,284,861 in reasonable royalties. (Id.) The court entered judgment on the verdict on May 4, 2010. (D.I. 324.) Presently before the court are the parties' post-trial motions.¹ Having considered the entire record in this case, the substantial evidence in the record, the parties' post-trial submissions, and the applicable law, the court will deny all the parties' post-trial motions with the exception of: Edwards' motion for pre-judgment and post-judgment interest (D.I. 344), which the court will grant; and Edwards' motion for permanent injunction and accounting (D.I. 356), which it will grant in part and deny in part. The court's reasoning follows.

II. BACKGROUND OF THE TECHNOLOGY

The patent-in-suit relates to medical device technology. Specifically, the '552 Patent relates to a "valve prosthesis, preferably a cardiac valve prosthesis, for implantation in the body . . ." ('552 Patent, col. 1, ll.13-15.) The object of the invention, and the key innovation upon which the parties focused at trial, is to provide a valve prosthesis that can be implanted in the body without the need for surgical intervention, but rather through use of a catheter. With respect to cardiac valves, the invention thus permits a valve to be implanted without the need for open heart surgery and the risks that come with such surgery. The claimed prosthesis comprises: "A collapsible elastical valve which is mounted on an elastic stent, the elastical valve having a plurality of commissural points" where the valve is attached to the stent. ('552 Patent, claim 1.) Relevant to the pending motions, the asserted claim requires that the stent include "cylindrical

¹ These motions are: CoreValve's Renewed Motion for Judgment as a Matter of Law (D.I. 318), CoreValve's Motion for a New Trial or Alternatively to Amend Judgment (D.I. 320), Edwards' Motion for Attorney Fees (D.I. 339), Edwards' Motion for Enhanced Damages Pursuant To 35 U.S.C. § 284 (D.I. 341), Edwards' Motion for Prejudgment and Postjudgment Interest (D.I. 344), CoreValve's Motion to Stay Judgment Pending Post-Trial Motions (D.I. 348), Edwards' Motion for Permanent Injunction, Accounting and Related Relief (D.I. 356), CoreValve's Local Rule 7.1.3(c)(2) Motion to Strike (D.I. 391), and CoreValve's Motion to Supplement Court Record (D.I. 417).

support means” and “a plurality of commissural supports projecting from one side of the cylindrical support means in a direction generally parallel to the longitudinal axis thereof.” (Id.)

III. DISCUSSION

A. Renewed JMOL Motions

To prevail on a renewed motion for judgment as a matter of law following a jury trial and verdict, the moving party “must show that the jury’s findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusion(s) implied [by] the jury’s verdict cannot in law be supported by those findings.” *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1348 (Fed. Cir. 1998) (quoting *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 893 (Fed. Cir. 1984)). “Substantial evidence” is defined as “such relevant evidence from the record taken as a whole as might be accepted by a reasonable mind as adequate to support the finding under review.” *Perkin-Elmer Corp.*, 732 F.2d at 893.

The court should only grant the motion “if, viewing the evidence in the light most favorable to the nonmovant and giving it the advantage of every fair and reasonable inference, there is insufficient evidence from which a jury reasonably could find liability.” *Lightning Lube, Inc. v. Witco Corp.*, 4 F.3d 1153, 1166 (3d Cir. 1993) (citing *Wittekamp v. Gulf Western Inc.*, 991 F.2d 1137, 1141 (3d Cir. 1993)). “In determining whether the evidence is sufficient to sustain liability, the court may not weigh the evidence, determine the credibility of witnesses, or substitute its version of the facts for the jury’s version.” *Lightning Lube*, 4 F.3d at 1166 (citing *Fineman v. Armstrong World Indus., Inc.*, 980 F.2d 171, 190 (3d Cir. 1992)). Rather, the court must resolve all conflicts of evidence in favor of the non-movant. *Williamson v. Consol. Rail Corp.*, 926 F.2d 1344, 1348 (3d Cir. 1991); *Perkin-Elmer Corp.*, 732 F.2d at 893.

“The question is not whether there is literally no evidence supporting the party against whom the motion is directed but whether there is evidence upon which the jury could properly find a verdict for that party.” *Lightning Lube*, 4 F.3d at 1166 (quoting *Patzig v. O’Neil*, 577 F.2d 841, 846 (3d Cir. 1978)). In conducting such an analysis, “the court may not determine the credibility of the witnesses nor ‘substitute its choice for that of the jury between conflicting elements of the evidence.’” *Syngenta Seeds, Inc. v. Monsanto Co.*, 409 F. Supp. 2d 536, 539 (D. Del. 2005) (quoting *Perkin-Elmer Corp.*, 732 F.2d at 893).

1. “Projecting”

CoreValve asserts that it is entitled to judgment as a matter of law (“JMOL”) because its accused device does not meet the limitation of the asserted claim “projecting from one side of the cylindrical support means in a direction generally parallel to the longitudinal axis thereof.” Here, a brief review of the discussions surrounding this phrase during the claim construction process illustrates that CoreValve’s renewed JMOL motion on this issue is actually an effort to reopen claim construction and grant CoreValve summary judgment based on a construction that the court never adopted. Initially the parties offered these proposed constructions for the phrase:

<p>Edwards: The commissural supports <i>project</i> from <i>one side</i> of the cylindrical support means in a direction generally parallel to the longitudinal axis of the cylindrical support means, namely, the commissural supports may not necessarily be parallel to that longitudinal axis in a strict geometric sense</p>	<p>CoreValve: <i>Extending away from one end</i> of the cylindrical support means in a direction generally parallel to the longitudinal axis of the cylindrical support means</p>
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(D.I. 45 at 12 (emphasis added).) The parties’ proposed constructions differed in at least two respects. First, Edwards’ construction included language (specifically, everything after “namely”) reminiscent of the language they proposed in their construction of the term

“cylindrical.” Second, whereas Edwards’ proposed construction left unaltered the “project[ing] from one side” claim language, CoreValve proposed a construction that replaced “projecting” with “extending away” and “one side” with “one end.”

With respect to the latter difference, CoreValve’s claim construction answering brief stated that its proposed construction “is important to specify that the supports do not extend from a *side* of the cylindrical support means, but rather from its end.” (D.I. 64 at 16 (emphasis in original).) Edwards took issue with CoreValve’s proposed “extending away from one end” construction in its answering brief. Edwards argued that “[e]xtending away” is inaccurate because a portion of the commissural supports in the preferred embodiment shown in Figure 2 overlap and thus do not extend away from one end of the cylindrical support means.” (D.I. 62 at 14.) At the *Markman* hearing, Edwards stated that the dispute regarding the “extending away from one side” limitation was over “a very minor detail” (id. at 30-31), and CoreValve agreed that their positions on the meaning of this phrase were “very close.” (D.I. 100 at 74.) Edwards did repeat its opposition to the “extending away” limitation as “an unnecessary limitation which isn’t there.” (Id. at 30.) CoreValve’s sole statement regarding its “extending away” proposal at the hearing was:

Now, [Edwards’ counsel] didn’t like the fact that we said extending away. We were trying to give another word for projecting. If the parties want to use projecting, that’s probably fine with us as well. We didn’t intend to change anything by “projecting.”

(Id. at 74.) No mention was made between the distinction between “one end” and “one side,” nor did CoreValve press the court further to adopt its “extending away construction,” despite the fact that Edwards had specifically repeated its opposition to CoreValve’s proposal.

Given the parties’ indication that they did not view the differences between their

proposals as substantial, the court adopted a construction of the term that left the claim language intact and gave the term its plain and ordinary meaning. (D.I. 271 at 3.) The court noted that the parties' proposed constructions were "quite similar." (Id.) Neither CoreValve nor Edwards filed a motion for reconsideration or clarification regarding the court's construction of this term. CoreValve filed no motions in limine asking the court to clarify or further limit the meaning of this term. The term was not mentioned at all in the pretrial conference. (See D.I. 276.) CoreValve did not file any pre-trial objections with the court asserting that the infringement analysis for this term in Dr. Nigel Buller's expert report violated the court's claim construction order, nor does CoreValve argue now that Dr. Buller's testimony regarding the limitation at trial differed from the analysis in his report.²

CoreValve is now, in effect, asking the court to read its proposal into the court's construction of the disputed term, and test the jury's verdict against that far more limiting construction. In support of its argument as to the unreasonableness of the jury's verdict, CoreValve cites dictionary definitions of "projecting" in an effort to establish the term's plain and ordinary meaning, and then notes that there is nothing projecting from the top *end* of CoreValve's device. These arguments are, in effect, an attempt to reopen claim construction for the disputed term. At this stage in the proceedings, CoreValve's claim construction arguments are untimely, and the court rejects its renewed JMOL motion on that basis alone.³ Edwards

² To the best of the court's knowledge, the only time that CoreValve raised this claim term before trial was its letter request to file a motion for summary judgment (D.I. 129), in which CoreValve also attempted to relitigate the court's constructions of "cylindrical" and "cylindrical support means" (see section III.A.4, *infra*). The court denied that letter request and a related subsequent "Motion for Clarification" (see D.I. 156) as untimely efforts to revisit claim construction. (See D.I. 149; D.I. 191.)

³ Moreover, even if the court were to open claim construction for this term, the definitions CoreValve provided divorce the word "projecting" from the context in which it appears in the claims, and CoreValve's arguments gloss over the fact that the claim requires commissural supports projecting from one *side* rather than from one *end* of the support means.

specifically objected to CoreValve’s “extending away” and “one end” limitations and noted that Figure 2 showed overlapping supports. Despite this, CoreValve indicated at the *Markman* hearing that it did not view its proposal as substantially different from Edwards’. If CoreValve wished for the court to further clarify the plain and ordinary meaning of the term with respect to their “extending away” and “one end” proposals, they could have insisted that the court rule on their proposed construction instead of stating that their proposed construction would not change the meaning of the term. Failing that, CoreValve could have filed a timely motion seeking clarification of the court’s construction as to this term.

The test is not how CoreValve or even the court would interpret the plain and ordinary meaning of “projecting.” Rather, the test is whether there is sufficient evidence to support the jury’s implicit finding that the commissural supports on CoreValve’s device “project[] from *one side* of the cylindrical support means,” given the plain and ordinary meaning of that phrase in the context of the disputed claim. At trial, Dr. Buller gave testimony that provided a reasonable basis for the jury to conclude that CoreValve’s device meets the requirements of the disputed claim term.⁴ CoreValve’s effort to create a more specific and limiting meaning of this term and test the jury’s verdict against that meaning is untimely and unavailing.

⁴ Specifically, Dr. Buller used a photograph of CoreValve’s device that was often used during trial to illustrate for the jury the location of the commissural points, commissural supports, and cylindrical support means. (See D.I. 337 at A894-96 (PTX 2135-2137.) Dr. Buller testified that the “top” portion of CoreValve’s device as shown in PTX 2136-37 contained the commissural supports (Tr. 768:21-771:2; PTX 2137) while the “bottom” portion contained the cylindrical support means. (Tr. 769:24-25; PTX 2136.) He then explained, using the court’s construction of the claim, how the commissural supports project from one side of the cylindrical support means, and how the commissural supports run generally parallel to the cylindrical support means. (Tr. 771:5-773:23.) It is true that these supports overlap with the cylindrical support means but, as Edwards notes, this is consistent with the specification and drawings of the ‘552 Patent. (See ‘552 Patent, Fig. 2 & col. 5:9-28.) In any case, and as discussed above, CoreValve’s proposal to further limit the meaning of the “projecting from one side” limitation is untimely.

Moreover, CoreValve’s effort to dismiss Dr. Buller’s illustrations of CoreValve’s device as “litigation-inspired” are unavailing. CoreValve did not object when Edwards moved to have those drawings moved into evidence. (Tr. 1003:14-20.) Furthermore, and as Edwards notes, experts routinely highlight and explain the components of an accused device in light of the asserted claim limitations. Indeed, the court is puzzled as to how infringement could ever be shown if experts were not permitted to refer to the accused device.

For similar reasons, the court rejects CoreValve's assertion that no reasonable jury could find that CoreValve's commissural support project "in a direction *generally parallel* to the longitudinal axis." CoreValve's argument depends on adopting a more limiting construction of the claim term than was included in the court's *Markman* order. Specifically, it requires that the "commissural supports" be limited so that the cells above the tabs that constitute the commissural points are excluded. The court's claim construction order, however, contains no such requirement. Indeed, both parties agreed that the proper construction of "commissural supports" is simply "portions of the stent that support the commissural supports of the valve." (D.I. 271 at 3.) CoreValve did not seek and the court did not impose a limitation excluding cells above the tab from being part of the "commissural supports." As with the "projecting from one side" portion of this limitation, Dr. Buller gave testimony that provided a reasonable basis for the jury to conclude that CoreValve's device meets the requirements of the disputed claim term.⁵ Consequently, the court denies CoreValve's renewed JMOL motion with respect to this limitation.⁶

2. Willful Infringement

CoreValve next argues that the evidence presented at trial was not sufficient to support the jury's finding of willfulness. Under the rubric established by *In re Seagate Tech., LLC*,

⁵ See footnote 4, *supra*. Dr. Buller testified that the "portions of the stent that support the commissural points of the valve" (the court's construction of "commissural points") consists of "the structure . . . that rises up from the cylinder support means to the top of the device." (Tr. 770:2-5.) Given the honeycomb-like structure of CoreValve's device, this structure runs along most of the length of the stent; as CoreValve's own witness stated: "The CoreValve stent has the commissural supports, supported in a honeycomb structure." (Tr. 1465:2-8.) Dr. Buller then testified that supporting structure, as a whole, runs in a direction generally parallel to the longitudinal axis even though there are curves within the structure. (See Tr. 771:22-773:23.) The jury could reasonably have accepted Dr. Buller's testimony.

⁶ CoreValve also argues that Edwards cannot resort to the doctrine of equivalents ("DOE") to prove infringement of the "commissural supports" claim term due to prosecution history estoppels. (See D.I. 335 at 9.) Since the jury found literal infringement of this claim, however, it did not (and did need to) determine DOE infringement. (See D.I. 313 at 2.) Consequently, the court finds that the DOE issue is moot.

willful infringement requires first that the patentee show that the infringer acted despite an objectively high likelihood that its actions constituted infringement. 497 F.3d 1360, 1371 (Fed. Cir. 2007). The existence of this risk is “determined by the record developed in the infringement proceeding.” *Id.* If the objective risk prong is satisfied, the patentee must then show that the infringer either knew or should have known of this objective risk. *Id.* By its nature, the issue of willfulness in patent infringement hinges both on the fact finder’s assessments of the credibility of witnesses and on the fact finder drawing inferences from the evidence presented to it. “The drawing of inferences, particularly in respect of an intent-implicating question such as willfulness, is peculiarly within the province of the fact finder that observed the witnesses.” *Liquid Dynamics Corp. v. Vaughan Co.*, 449 F.3d 1209, 1225 (Fed. Cir. 2006). Since this case was tried before a jury, the court will not lightly disturb the jury’s finding of willfulness.

In support of its arguments for a JMOL of non-willfulness, CoreValve cites the testimony of fact witnesses who testified as to the development of the Gen 3 device and their belief that the device did not infringe. (See D.I. 335 at 11.) The jury was under no obligation, however, to accept the testimony of CoreValve’s witnesses. For instance, the jury was free to reject – and apparently did reject – Mr. Bortlein’s assertion that he designed the Gen 3 device so that it contained no projecting commissural supports. (See D.I. 335 at 11 (citing Tr. 1035:4-1038:2).) Assessments of such testimony fall squarely within the province of the jury. CoreValve also cites the PTO’s decision to grant CoreValve patents covering the Gen 3 device. While CoreValve correctly notes that evidence of such patents is potentially relevant to the issue of willfulness, it is not for the court to decide how much weight the jury should have given to CoreValve’s patents in this case. Moreover, as Edwards notes in its answering brief, the record

contains considerable evidence from which a jury could have inferred willfulness. (See D.I. 369 at 10.) For these reasons, the court will deny CoreValve's renewed motion for JMOL on the issue of willfulness.

3. Non-Enablement

CoreValve next argues that no reasonable jury could have rejected CoreValve's non-enablement defense to claim 1. Non-enablement is an invalidity defense that must be established by clear and convincing evidence. *E.g., Mentor H/S, Inc. v. Med. Device Alliance, Inc.*, 244 F.3d 1365, 1375 (Fed. Cir. 2001). To be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without "undue experimentation." *E.g., Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997).

CoreValve's motion confuses the standard under which enablement is determined by discussing enablement in terms of attributes that must be enabled "to cover the CoreValve device" rather than in terms of the language and scope of the actual claims. Specifically, CoreValve argues:

[T]o cover *the CoreValve device*, claim 1 must encompass a device with "commissural supports projecting from one side . . . in a direction generally parallel" that is also (1) self-expanding, (2) suitable for use in humans, (3) suitable for delivery via minimally invasive techniques such as through the transfemoral artery, and (4) securable in the aortic annulus, like CoreValve's Gen 3.

(D.I. 335 at 12-13 (emphasis added).) CoreValve then proceeded to argue that each of the numbered attributes was not enabled by the '552 Patent.⁷

⁷ Notably, CoreValve made no effort to argue that the '552 Patent did not enable "commissural supports projecting from one side . . . in a direction generally parallel," which was the only language from the actual claims that appeared in this section of CoreValve's motion. CoreValve only argued that there was nothing "projecting" in

CoreValve’s recitation of what “claim 1 must encompass” in order “to cover the CoreValve device” is a misleading characterization of what must be enabled under § 112. It is the asserted claims rather than the accused device which must be “enabled” by the patent-in-suit. *See, e.g., Durel Corp. v. Osram Sylvania Inc.*, 256 F.3d 1298, 1306 (Fed. Cir. 2001). In this case, the court did not construe the asserted claims to cover the four attributes of the accused device that CoreValve raises in its non-enablement argument, and CoreValve does not appear to make any effort to tie those attributes back to the actual claim language or to argue that actual limitations appearing in the asserted claim are not enabled. While it is true that the specification must enable the full scope of the asserted claim, there is no requirement that the claims must cover all features of the accused device. As the Federal Circuit has explained:

The dispositive question of enablement does not turn on whether the accused product is enabled. Rather, “[t]o be enabling, the specification of the patent must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation.”

Durel, 256 F.3d at 1306 (internal citation omitted).⁸

By that standard, since the court cannot discern from CoreValve’s motion which limitations of the asserted claims are purportedly not enabled, CoreValve’s motion does not even raise a colorable non-enablement defense against which the court can test the jury’s verdict.

the ‘552 Patent’s only example of a “self-expandable” device. Self-expansion is not, however, required by or mentioned in the asserted claim.

⁸ In *Invitrogen Corp. v. Clontech Laboratories, Inc.*, the Federal Circuit explained the reasoning underlying this approach to enablement:

Enablement does not require the inventor to foresee every means of implementing an invention at pains of losing his patent franchise. Were it otherwise, claimed inventions would not include improved modes of practicing those inventions. Such narrow patent rights would rapidly become worthless as new modes of practicing the invention developed, and the inventor would lose the benefit of the patent bargain.

429 F.3d 1052, 1071 (Fed. Cir. 2005).

Certainly, considering the clear and convincing standard that non-enablement defenses must meet, CoreValve has failed to show that no reasonable jury could conclude that claim 1 of the '552 Patent is enabled.

4. "Cylindrical support means"

The next ground upon which CoreValve moves for JMOL relates to the court's construction of "cylindrical support means." CoreValve asked the court to revisit its construction of this term repeatedly throughout the pre-trial process and during the trial itself. CoreValve's repeated efforts to revisit claim construction led the court to warn CoreValve's counsel at trial to "stop pushing the issue." (Tr. 1649:11-18.) CoreValve chose to ignore the court's warning, and has once again raised the issue in their renewed JMOL motion. The court will deny the motion as (another) untimely effort to reopen claim construction and test the jury's verdict against a construction that did not appear in the court's *Markman* order.

The court will not comment further on the substance of the motion. Since attempts to relitigate claim construction have become increasingly prevalent, however, the court feels it necessary to lay out the history behind CoreValve's efforts to revisit claim construction on this issue. The court's claim construction order specifically rejected CoreValve's proposed constructions of "cylindrical support means" and "cylindrical," and specifically noted that the court rejected CoreValve's suggestion that "cylindrical" as that word is used in the disputed terms requires that the diameter be "constant along the longitudinal axis" as in the case of perfect geometric cylinders. (See D.I. 109 at 2 & 4; D.I. 271 at 2 & 4.) CoreValve did not file a motion for reargument during the ten day time frame imposed under Local Rule 7.1.5.⁹ Once that period

⁹ Local Rule 7.1.5 has since been amended to provide a fourteen day period for filing motions for reargument.

passed, the claim construction phase of the pre-trial process was complete.

Just a few weeks later, however, CoreValve attempted to revisit the constructions of “cylindrical” and “cylindrical support means” in its letter request to file a motion for summary judgment. (D.I. 129.) Despite the court’s specific instruction that cylindrical did not mean “constant along the longitudinal axis” in the context of the disputed claims, CoreValve’s letter argued that the court’s claim construction was “grounded” in the geometric definition of a perfect cylinder with “straight parallel sides.” (Id. at 2.) The court denied the letter request in an order that concluded by stating that “the court agrees with the plaintiffs, and will deny, as untimely, the defendant’s request for reconsideration of the court’s May 27, 2009 *Markman* order.” (See D.I. 149.)

Undeterred, CoreValve filed a “Motion for Clarification” (D.I. 156) that contained a jumble of arguments stemming from CoreValve’s insistence that “cylindrical” should be construed as referring to its “ordinary meaning” of cylinder (id. at 3) as “a shape with straight parallel sides.” (Id. at 2.) CoreValve warned that if the court failed to “resolve” this issue, “the parties would inevitably litigate claim construction issues before the jury.” The motion concluded with the following request:

If the Court’s use of the word “cylinder” in its claim construction was intended to refer to shapes that did not have the properties of a cylinder, as reflected by its ordinary meaning, then CoreValve respectfully requests clarification of the Court’s view of the meaning of that term pursuant to *O2 Micro*, as a matter of law. If, on the other hand, the Court intends the parties to litigate before the jury whether the accused device has a shape “of or relating to a cylinder” under the ordinary meaning of the word “cylinder” as set forth in CoreValve’s letter brief (D.I. 129), then CoreValve respectfully requests that the Court delete the last sentence from its [aforementioned order denying CoreValve’s letter request to file a summary judgment motion].

(Id. at 3.)

The court denied this motion in an order dated January 7, 2010:

Arguments concerning claim construction should have been presented at the *Markman* hearing or in the briefs filed with the court in connection with the *Markman* hearing. The defendant did not file a motion for re-argument within the ten-day period after the *Markman* order was issued, as is required under Local Rule 7.1.5, and the court will not permit the parties to argue or re-argue matters of claim construction at this stage.

(D.I. 191.) Upon further consideration, however, the court recognized that without further intervention, CoreValve's prediction that the parties might litigate claim construction issues before the jury might prove to be a self-fulfilling prophesy. Consequently, the court announced at the pretrial conference that it would make a minor amendment to footnote 13 in order to specify how it was rejecting CoreValve's argument. The court then issued an order formalizing this amendment, which changed the last sentence of footnote 13 of the court's *Markman* order so that it read "the court rejects the defendant's proposed construction that requires 'a diameter that is constant along the longitudinal axis'" instead of simply "[t]he court rejects the defendant's proposed construction." (*Compare* D.I. 271 at 4, note 13, *with* D.I. 109 at 4, note 13.)

The court fervently hoped that this amendment would deter CoreValve from raising this claim construction issue again at trial. Unfortunately, it did not take long for CoreValve to dash those hopes. At trial, CoreValve witness Dr. Martin Rothman testified as follows when asked whether CoreValve's device had a shape "of or related to a cylinder" as required by the court's construction:

Well, to my mind, again, the "related to," we're not taught related by how much. And I take the cylinder to have parallel sides or virtually parallel sides and that is my definition, general definition of a cylinder.

(Tr. 1636:23-1637:3.) Shortly thereafter, CoreValve's counsel asked the court at sidebar

whether they could make a proffer of “evidence concerning the cylindrical rotation that would be pursuant to [CoreValve’s] proposed claim construction.” (Tr. 1649:11-13.) The court denied the request and warned CoreValve to “stop pushing the issue.” (Tr. 1649:14-18.) On cross examination, Dr. Rothman again testified, in response to a question as to the meaning of “cylinder” in the context of the claims, that he took “cylinder” to mean an object whose “diameter . . . remain[s] constant” between the sides. (Tr. 1693:12-16.) Dr. Rothman insisted that he applied the court’s claim construction, but his testimony clearly conflicted with the court’s clear statement in its claim construction order that “cylindrical” within the meaning of the claims does not require “a diameter that is constant along the longitudinal axis.”

With hope springing eternal, the court believed that the end of the jury trial, combined with the court’s explicit warning at sidebar, would finally lead CoreValve to recognize that it would accomplish nothing by continuing to harass the court with belated claim construction arguments. Once again, the court apparently hoped for too much. In its post-trial motions, CoreValve once again is urging the court to adopt their proposed constructions of “cylindrical” and “cylindrical support means” and test the jury’s verdict against those constructions. (See D.I. 335 at 16-19.) It has raised this argument both in its renewed JMOL motion and in its motion for a new trial (see *infra*, section III.B).

When parties repeatedly attempt to revisit claim construction months after the court issues its *Markman* order, it wastes the court’s time and undermines the court’s ability to resolve legal issues in an efficient and timely manner. Moreover, such efforts are bound to fail, since counsel on both sides are well aware that this court simply will not permit the sort of wholesale relitigation of a disputed claim term that CoreValve has sought (and sought and sought again).

The problem is even more serious where, as here, the party presents a witness who testifies and provides an interpretation of claim term that is plainly at odds with the court's claim construction order. In addition to violating the Federal Circuit's repeated directives that claim construction issues not be brought up at trial, presenting such testimony creates the potential for jury confusion. Such conduct is simply unacceptable in light of trial counsels' duties as officers of the court.

If a party disagrees with one or more of the court's claim constructions, the appropriate course is for the party to make its record during the *Markman* phase and pursue that issue on appeal. If appropriate, the party may also file a motion for reargument under Local Rule 7.1.5, bearing in mind that such motions are only "sparingly granted." See Local Rule 7.1.5(a). If the party fails to file such a motion, they cannot later reopen the issue by repeatedly harassing the court with untimely motions, requests, and proffers of evidence relating to their rejected claim construction. Such actions serve no constructive purpose.¹⁰ In the future, parties who engage in such conduct may face sanctions.

5. Damages

The court also rejects CoreValve's renewed JMOL motion with respect to damages. For the reasons stated below in Part III.B, the court concludes that a reasonable jury could have concluded that the first date of infringement was January 2006 and that Edwards would have been able to meet demand and make the necessary sales. A reasonable jury could likewise have rejected CoreValve's contention that it would not have been able to move its manufacturing operations abroad (thus allowing CoreValve to avoid infringement) before January 2006.

¹⁰ The court notes that a party's ability to appeal from the court's *Markman* order to the Federal Circuit after the trial is complete is not, to its knowledge, enhanced in any way by repeated efforts to revisit the issue at later stages in the trial process.

Edwards cites evidence presented at trial that the expense of moving operations from Irvine, California to an overseas location would have been expensive and disruptive, and would have deprived CoreValve of key design experts. (E.g., Tr. 917:17-918:4; 925:3-927:8; 944:3-947:18.) For these reasons, the court will deny CoreValve's motion.

B. New Trial Motion

CoreValve also moves the court to grant a new trial on a number of bases. First, CoreValve argues that the verdict was contrary to the weight of the evidence for the reasons spelled out in its renewed JMOL motion. The court rejects these arguments for the reasons laid out in sections III.A.1-3, *supra*.¹¹

CoreValve also requests a new trial because, it argues, the court's instruction as to "comprising" claims (see Jury Instruction 3.4) allowed the jury to read "projecting" out of the asserted claims. Jury Instruction 3.4 provides as follows:

The preamble to Claim 1 of the '552 patent uses the phrase "the stent comprises." This claim is open-ended. The word "comprising" means "including" or "containing." As such, the claim is not limited to only what is in the claim.

If you find that the CoreValve GEN 3 ReValving system includes all of the elements of Claim 1 of the '552 patent, the fact that the CoreValve GEN 3 ReValving system also may include features or components not required by the claims is irrelevant. The presence of additional features or components in the GEN 3 ReValving system would not avoid infringement of claim 1.

(D.I. 311, Final Jury Instructions at 19.) CoreValve does not argue that any portion of this instruction is legally incorrect. Nor could it – the meaning of "comprising" as an open-ended transition in patent claims is well-established and understood, supported by decades of Federal Circuit case law. *E.g., CIAS, Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1360 (Fed. Cir.

¹¹ CoreValve's arguments concerning "projecting" and "cylindrical support means" were yet another example of their efforts to reopen claim construction.

2007) (“In the patent claim context the term ‘comprising’ is well understood to mean ‘including but not limited to.’”).

Instead, CoreValve argues that the court erred in refusing to add the phrase “unless those additional features cause the accused device to lack a claim limitation” to the end of the instruction. The court is, frankly, at a loss to see how such an addendum is necessary in light of the fact that the instruction specifically begins with the words: “*If you find that the CoreValve GEN 3 ReValving system includes all of the elements of Claim 1 of the ‘552 patent.*” (D.I. 311, Final Jury Instructions at 19 (emphasis added).) Moreover, the very next instruction reiterated that the jury could only find literal infringement of the asserted claim “if CoreValve’s GEN 3 product includes each and every element in the asserted claim. . . . If CoreValve’s GEN 3 product does not contain one or more elements recited in Claim 1, then CoreValve does not literally infringe that claim.” (Id. at 20.) The court’s instruction on the open-ended nature of “comprising” was accurate and straightforward. Including CoreValve’s proposed addition would have been unnecessarily duplicative at best. At worst, it would have been misleading and confusing, since an instruction including the word “unless” might be construed as presenting a (non-existent) exception to the rule that additional features beyond those satisfying the limitations of a “comprising” claim are irrelevant. CoreValve’s motion for a new trial based on this instruction is therefore denied.

For similar reasons, the court rejects CoreValve’s motion for a new trial based on the instruction regarding the term “cylindrical.” CoreValve specifically requested before trial that the instruction state: “On the other hand, an object described as cylindrical must function as a cylinder.” The court denied this request. CoreValve now moves for a new trial because the final

construction relating to this term “emphasized the breadth of the claim term . . . by highlighting what the limitation does *not* require (a ‘diameter constant along its length’ or ‘the presence of a perfect geometric cylinder’)” without including “any explanation of what the claim limitation *does* require.” (D.I. 336 at 10 (emphasis in original).) This portion of CoreValve’s motion boils down to yet another effort to reopen claim construction on the terms “cylindrical” and “cylindrical support means.” CoreValve’s objection ignores the fact that the court’s claim construction order specifically addresses the issue of whether a “cylindrical” object within the meaning of the claim must be a perfect geometric cylinder with a diameter that is constant along its length, but makes no reference to whether the object must “function as a cylinder.” There is no requirement that the court “counterbalance” the construction adopted in its claim construction order with language proposed by the party whose construction it rejected.

CoreValve also moves for a new trial “to correct the exclusions of evidence about the conclusions of foreign courts concerning similarly-worded claims.” (See D.I. 336 at 8-9.) However, as the “similarly-worded” characterization of the claims in question suggests, the claims for which CoreValve sought to introduce evidence are not the same as the claim asserted in this case. Indeed, as Edwards points out in its answering brief, the European claims at issue in the British and German cases differed in material ways from the ‘552 Patent, which was not and apparently could not be asserted in the European cases. Moreover, the parties do not appear to dispute that foreign courts have procedures, legal standards, and substantive laws that often differ substantially from those of American courts in patent infringement cases. In the court’s judgment, these differences created a risk of unfair prejudice and jury confusion far outweighing the evidence’s probative value. CoreValve’s motion is, therefore, denied.

Lastly, CoreValve asks the court to either limit the jury's damages award to no more than \$1.2 million, or grant a new trial on the issue of damages. (D.I. 336 at 12.) CoreValve contends that the jury based its damages award on a date of first infringement that was unsupported by the evidence presented at trial. (Id. at 13.) Moreover, CoreValve presented evidence that Edwards did not have the capacity to fulfill most of CoreValve's infringing sales. (Id. at 14.) According to CoreValve, the evidence presented at trial also shows that many of CoreValve's customers would have refused to use an Edwards device, indicating that Edwards did not lose potential customers to CoreValve. (Id. at 15-16.)

In response, Edwards contends that the jury was entitled to reject CoreValve's proposed date of first infringement, which was calculated based on the manufacture of a device that was not accused of infringement at trial. (D.I. 370 at 15-16.) Edwards contends that the jury also properly rejected CoreValve's noninfringing alternative of moving abroad because Edwards demonstrated that CoreValve had limited capital and could not design a marketable product abroad. (Id. at 16-17.) Moreover, Edwards contends that Edwards and CoreValve were in direct competition to train the same highly rated heart centers in the use of their products, resulting in lost profits to Edwards. (Id. at 18.) According to Edwards, the jury's verdict on lost profits is reasonable because it reflects damages only for the patients treated by CoreValve's infringing device which Edwards had the capacity to treat. (Id. at 18-19.)

The court concludes that the weight of the evidence in support of the damages award is not so lacking that, without remittitur or a new trial, a miscarriage of justice would result. The jury was entitled to reject CoreValve's proffered first date of infringement and accept Edwards' calculation based on the date that the infringing device was first manufactured. (Tr. 1521:12-

1522:23, 1549:6-24.) Moreover, Edwards presented sufficient evidence for the jury to reasonably conclude that Edwards lost customers to CoreValve, despite CoreValve's contention that Edwards was unable to meet existing demand. (Tr. 521:9-522:22; D.I. 329 at 964:6-967:16.) The jury's lost profits calculation, based on the number of patients treated with CoreValve's device who could have been treated by Edwards at the time, was also reasonable in light of the evidence presented at trial. (Tr. 958:1-961:12.) Furthermore, the jury was entitled to discredit CoreValve's contention that doctors would refuse to use Edwards' device, particularly since Edwards presented medical evidence showing that a patient in need of a transcatheter heart valve device would suffer a short, poor quality of life without one. (Tr. 909:9-911:11.) Thus, the court will uphold the jury verdict as it applies to the award of damages.

C. Motion for Enhanced Damages

Edwards seeks enhanced treble damages for CoreValve's willful infringement of the patent-in-suit. Pursuant to 35 U.S.C. § 384, a court may "increase the damages up to three times the amount found or assessed." An increased damages award requires a showing of willfulness. *Seagate*, 497 F.3d at 1368. A finding of willfulness, however, does not mandate enhanced damages, much less treble damages. *See Cybor Corp. v. FAS Techs, Inc.*, 138 F.3d 1448, 1461 (Fed. Cir. 1998) (citing *Modine Mfg. Co. v. The Allen Group, Inc.*, 917 F.2d 538, 543 (Fed. Cir. 1990); *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 826 (Fed. Cir. 1992). "Rather, '[t]he paramount determination [for enhanced damages] . . . is the egregiousness of the defendant's conduct based on all the facts and circumstances.'" *Electro Scientific Indus., Inc. v. General Scanning, Inc.*, 247 F.3d 1341, 1353 (Fed. Cir. 2001) (citation omitted). Thus, enhancement of damages is within the discretion of the district court and is informed by the totality of the circumstances.

See State Indus., Inc. v. Mor-Flo Indus., Inc., 948 F.2d 1573, 1576 (Fed. Cir. 1991).

Factors the court may take into consideration when determining whether, and to what extent, to exercise its discretion include: (1) whether the infringer deliberately copied the ideas or design of another; (2) whether the infringer, when he knew of the other's patent protection, investigated the scope of the patent and formed a good-faith belief that it was invalid or that it was not infringed; (3) the infringer's behavior as a party to the litigation; (4) the infringer's size and financial condition; (5) the closeness of the case; (6) the duration of the infringer's misconduct; (7) any remedial action by the infringer; (8) the infringer's motivation for harm; and (9) whether the infringer attempted to conceal its misconduct. *Read Corp.*, 970 F.2d at 826. The ultimate question remains, however, "whether the infringer, acting in good faith and upon due inquiry, had sound reason to believe that it had the right to act in the manner that was found to be infringing." *SRI Intern., Inc. v. Advanced Technology Labs., Inc.*, 127 F.3d 1462, 1464-65 (Fed. Cir. 1997).

Upon consideration of the parties' submissions and the *Read* factors, the court finds that enhanced damages are not warranted in this case under 35 U.S.C. § 284. Although the jury found that CoreValve's infringement of the asserted claim was willful, the court finds that the issue was sufficiently close that enhanced damages are not warranted. CoreValve mounted a substantial challenge to Edwards' infringement contentions and presented considerable evidence in support of their assertions of non-infringement. *See Delta-X v. Baker Hughes Prod. Tools*, 984 F.2d 410, 413 (Fed. Cir. 1993) ("[A]n infringer may generally avoid enhanced damages with a meritorious good faith defense and a substantial challenge to infringement.") CoreValve's defenses, although ultimately unsuccessful, were not frivolous and – their repeated efforts to

reopen claim construction notwithstanding – were litigated in apparent good faith. Moreover, the court cannot discern any evidence that CoreValve copied Edwards’ invention or attempted to conceal their infringement. Therefore, the court finds that enhancement of damages is inappropriate in this case.

D. Motion for Attorney’s Fees

Because the court does not find this case to be exceptional by clear and convincing evidence as required by 35 U.S.C. § 285, the court will not award attorneys’ fees and costs. In deciding whether to award attorney’s fees, the court must undertake a two-step inquiry. *Interspiro USA, Inc. v. Figgie Intern. Inc.*, 18 F.3d 927, 933 (Fed. Cir. 1994). First, the court “must determine whether there is clear and convincing evidence that the case is ‘exceptional.’” *Id.* (quotation omitted). Second, the court must determine whether “an award of attorney fees to the prevailing party is warranted.” *Id.* Exceptional cases include: “inequitable conduct before the PTO; litigation misconduct; vexatious, unjustified, and otherwise bad faith litigation; a frivolous suit or willful infringement.” *Epcon Gas Sys., Inc. v. Bauer Compressors, Inc.*, 279 F.3d 1022, 1034 (Fed. Cir. 2002) (citation omitted).

An award of attorney fees under § 285 is not intended to be an “ordinary thing in patent cases,” and should be limited to circumstances in which it is necessary to prevent “a gross injustice” or bad faith litigation. *Forest Labs., Inc. v. Abbott Labs.*, 339 F.3d 1324, 1329 (Fed. Cir. 2003); *see also Aptix Corp. v. Quickturn Design Sys., Inc.*, 269 F.3d 1369, 1375 (Fed. Cir. 2001) (affirming an award of attorney fees under § 285 for the “extreme litigation misconduct” of falsifying evidence); *Beckman Instruments, Inc. v. LKB Produkter AB*, 892 F.2d 1547 (Fed. Cir. 1989) (affirming an award under § 285 following repeated violations of a permanent

injunction and a district court finding of a “strategy of vexatious activity”).

The defendants’ conduct in this case does not rise to a level of bad faith or vexatious litigation that warrants an award of attorneys’ fees and costs. The court was, admittedly, dismayed at CoreValve’s repeated efforts to reargue claim construction issues well after the *Markman* phase was complete, and this conduct weighs in favor of an award of attorney’s fees. For the most part, however, the record demonstrates that both sides defended their respective positions throughout this litigation in apparent good faith. See *Forest Labs., Inc. v. Ivax Pharms., Inc.*, No. 03-891-JJF, 2008 U.S. Dist. LEXIS 14623, at *6-7 (D. Del. Feb. 26, 2008) (noting that “hard-fought” litigation does not necessarily constitute “vexatious or bad faith litigation” for purposes of awarding attorney fees under § 285). The court therefore finds that none of the parties are entitled to an award for attorneys’ fees and costs in this case.

E. Prejudgment and Postjudgment Interest

The court will grant Edwards’ motion for prejudgment and postjudgment interest (D.I. 344) and set the interest rate at the Prime Rate, compounded quarterly. “‘The Federal Circuit has given district courts great discretion’ when determining the applicable interest rate for an award of prejudgment interest.” *IPPV Enterprises, LLC v. EchoStar Comm'n Corp.*, No. Civ. A. 99-577-KAJ, 2003 WL 723260, at *3 (D. Del. Feb. 27, 2003) (citation omitted). “Courts have recognized that the prime rate best compensate[s] a patentee for lost revenues during the period of infringement because the prime rate represents the cost of borrowing money, which is ‘a better measure of the harm suffered as a result of the loss of the use of money over time.’” *IMX, Inc. v. LendingTree, LLC*, 469 F.Supp.2d 203, 227 (D. Del. 2007) (citing *Mars, Inc. v. Conlux USA Corp.*, 818 F.Supp. 707, 720-21 (D. Del. 1993), *aff'd*, 16 F.3d 421 (Fed. Cir. 1993)).

CoreValve's arguments to the contrary notwithstanding, the court concludes that the prime rate is a reasonable approximation of Edwards' cost of borrowing money during the relevant period. Accordingly, the court will order CoreValve to pay prejudgment and postjudgment interest at the prime rate, compounded quarterly.¹²

F. Permanent Injunction and Accounting

Edwards' final motion requests that the court issue a permanent injunction and order an accounting with respect to infringing sales made after March 15, 2010. The court will grant Edwards' motion in part and deny it in part. Specifically, the court will deny Edwards' request for a permanent injunction but will grant its request for an accounting.

A district court "may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable." 35 U.S.C. § 283. "According to well-established principles of equity, a plaintiff seeking a permanent injunction must satisfy a four-factor test before a court may grant such relief." *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006). A plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction. *Id.* "Courts awarding permanent injunctions typically do so under circumstances where [the] plaintiff practices its invention and is a direct market competitor." *Advanced Cardiovascular Sys. v. Medtronic Vascular, Inc.*, 579 F. Supp. 2d 554, 558 (D. Del. 2008).

¹² Since the court is denying Edwards' motions for enhanced damages and attorney's fees, the court denies the motion as moot to the extent that it requests interest on those items.

While the *eBay* standard makes clear that past harm is relevant to the irreparable harm analysis, an injunction is by definition a prospective remedy. *See, e.g., i4i Ltd. Partnership v. Microsoft Corp.*, 598 F.3d 831, 861-62 (Fed. Cir. 2010) (“Although injunctions are tools for prospective relief designed to alleviate future harm, by its terms the first *eBay* factor looks, *in part*, at what has already occurred” (emphasis added)). In this case, the irreparable harm factor weighs against granting a permanent injunction for several closely-related reasons. First, the “irreparable” component of the injury that Edwards alleges stems from CoreValve’s past conduct, and would continue even if a permanent injunction were issued. Edwards makes no allegations of *prospective* lost customers or harms that are truly irreparable unless the court issues a permanent injunction. On the contrary, the court concludes that with respect to the irreparable harms that Edwards alleges, Edwards would not benefit substantially from an injunction being issued at this stage, several years after CoreValve’s accused product entered the market.

Tellingly, the heading of the irreparable harm section of Edwards’ opening brief states: “Irreparable Harm is Shown by How CoreValve Caused Edwards to Lose First-Mover Advantage and Market Share.” (D.I. 357 at 6.) As the past-tense phrasing of the heading indicates, the injury that Edwards identifies as irreparable stems from events that occurred well before trial. At its core, the irreparable injury that Edwards asserts stems from the fact that CoreValve was the first to enter the market for the technology in question. (See *id.* at 8.) As a result, Edwards argues:

Edwards lost a substantial share of the market because of CoreValve’s willful infringement, and Edwards lost the opportunity to establish relationships and train medical centers that it otherwise could have had CoreValve not been on the market. Moreover, Edwards’ reputation as a global leader in the science of heart

valves has been compromised by CoreValve's early unauthorized entry into the market and continued willful infringement.

(Id. at 8-9.)

A permanent injunction would not change the fact that CoreValve was the first to bring its technology to market, nor would it reverse the reputational damage done to Edwards as a result of CoreValve getting its product to market before Edwards. Edwards does not explain how the alleged competitive market advantage that CoreValve established before the trial would be remedied by a permanent injunction stretching into the future. Consequently, the court cannot conclude that Edwards' alleged irreparable injuries are redressable by injunction.

Second, Edwards' allegations of irreparable harm are undercut because CoreValve's infringement stems not from sales of the accused product, all of which occurred outside the United States, but rather from the manufacturing of the accused product in the United States.¹³ Thus, Edwards must establish that CoreValve's *manufacturing operations in the United States* are continuing and will continue to cause irreparable harm if not enjoined. Edwards, however, does not appear to dispute that CoreValve would be able to move its remaining manufacturing operations to Mexico almost immediately if the court enjoined it from continuing to manufacture its products in the United States.¹⁴ (See, e.g., D.I. 402 at 1 ("Even now, CoreValve admits that it has been moving off shore to Mexico since January 2010 and could immediately ramp up

¹³ Edwards requests that the court issue a far wider injunction covering "all modes of infringement," apparently including infringement under § 271(f), even though the jury only decided the issue of infringement under § 271(a). Indeed, the court specifically ruled that Edwards could not raise § 271(f) infringement at trial in this case due to lack of notice. (See D.I. 280.) Moreover, infringement of the '552 Patent, including § 271(f) infringement, as a result of MedTronic's activities in Mexico is currently the subject of a separate infringement suit between the same parties in this court, *Edwards Lifesciences AG v. Medtronic, Inc.*, 09-873-GMS. The court will not issue an injunction covering potential modes of infringement that it has not yet adjudicated, and that have not yet had an opportunity for a full hearing.

¹⁴ While the jury's verdict carried with it an implicit finding that CoreValve would not have been able to move its manufacturing operations abroad by January 2006, it carried no such implicit finding with respect to whether CoreValve could do so today.

manufacturing there.”); *id.* at 7-8; D.I. 357 at 15.) Thus, CoreValve would remain in the market with little or no interruption even if the court were to enjoin its infringing manufacturing operations in the United States, and an injunction thus would not affect the alleged harm.

As to the second *eBay* factor, any harm that Edwards does continue to suffer as a result of CoreValve continuing its United States manufacturing operations can be redressed by a monetary remedy. As with the other *eBay* factors, the burden for establishing the inadequacy of legal remedies falls on the plaintiff. *E.g., eBay*, 547 U.S. at 391 (stating that the plaintiff must satisfy the four-factor test and demonstrate the presence of each factor). In its brief with respect to this factor, Edwards argues that since CoreValve is the only competitor in the market, monetary damages are insufficient. (See D.I. 357 at 10.) Edwards cites no evidence or testimony in the record, however, in support of its assertion that monetary damages would be inadequate to compensate Edwards if CoreValve were permitted to continue its United States manufacturing operations. (See *id.* at 10-11.) Instead, its section addressing this factor is “nothing more than attorney argument.” See *Telcordia Techs., Inc. v. Cisco Systems, Inc.*, 592 F. Supp. 2d 727, 748 (D. Del. 2009). As it did in this case, Edwards can bring suit against CoreValve and seek damages if CoreValve continues its infringing manufacturing operations in spite of the judgment of infringement. Moreover, Edwards has licensed the ‘552 Patent to a competitor, 3F Therapeutics, for a field of use that overlaps significantly with that of Edwards’ Sapien product. (See A116.) While not determinative, such licensing activity is further evidence that monetary damages would be adequate to compensate Edwards for any future infringing manufacturing operations by CoreValve.¹⁵ See, *e.g., Telcordia*, 592 F. Supp. 2d at 748 n. 10.

¹⁵ Since the court is denying Edwards’ request for a permanent injunction, the parties may, of course negotiate a license regarding the patent-in-suit. As the Federal Circuit has stated:

The remaining two *eBay* factors do not alter the court's analysis, since the only practical effect of a permanent injunction would be that CoreValve would be forced to move its United States manufacturing operations for the accused product to Mexico. Consequently, Edwards' market position and the parties' ability to sell their products would remain substantially the same regardless of whether an injunction is issued. The court fails to see what hardship Edwards would suffer if CoreValve were permitted to continue manufacturing its product in the United States, as opposed to in Mexico, that could not be compensated through remedies at law. The public interest would not be substantially advanced or harmed by the issuance of an injunction, since CoreValve would be able to continue manufacturing accused product abroad without seriously affecting the supply of the product available to the public. Consequently, the court will deny Edwards' motion for a permanent injunction.

The court will grant, however, Edwards' request for an accounting of the number of CoreValve Revalving System devices made, used, sold, offered for sale, imported or supplied in or from the United States and corresponding revenue from March 16, 2010 through the date of the order accompanying this memorandum.¹⁶

G. Other Post-Trial Motions

In addition to renewed JMOL and new trial motions discussed above, there are also three

In most cases, where the district court determines that a permanent injunction is not warranted, the district court may wish to allow the parties to negotiate a license amongst themselves regarding future use of a patented invention before imposing an ongoing royalty. Should the parties fail to come to an agreement, the district court could step in to assess a reasonable royalty in light of the ongoing infringement.

Paice LLC v. Toyota Motor Corp., 504 F.3d 1293, 1315 (Fed. Cir. 2007).

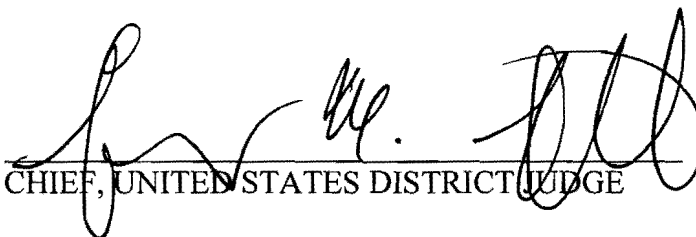
¹⁶ It does not appear that CoreValve opposes Edwards' accounting request. (*See* D.I. 392.) The court's order with respect to accounting is made with the understanding that CoreValve remains liable only for the type of infringement that was the subject of the jury's verdict. That is to say, Edwards' damages are limited to lost profits and reasonable royalties, plus pre-judgment and post-judgment interest at the Prime Rate, resulting from CoreValve's manufacturing of infringing devices in the United States. *See* note 13, *supra*.

other post-trial motions currently pending: CoreValve's Motion to Stay Judgment Pending Post-Trial Motions (D.I. 348), CoreValve's Local Rule 7.1.3(c)(2) Motion to Strike (D.I. 391),¹⁷ and CoreValve's Motion to Supplement Court Record (D.I. 417). The court will deny each of these motions without comment.

IV. CONCLUSION

For the reasons stated above, the court will grant Edwards' motion for pre-judgment and post-judgment interest (D.I. 344), grant-in-part and deny-in-part Edwards' motion for permanent injunction, accounting and related relief (D.I. 356), and deny the remaining pending motions.

Dated: February 7, 2011


CHIEF, UNITED STATES DISTRICT JUDGE

¹⁷ The motion is styled "Motion to Strike Under Local Rule 7.1.3(c)(2) Portions of Edwards' Reply Briefs in Support of Its Motions for Enhanced Damages and Attorneys' Fees." (D.I. 391.)

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

EDWARDS LIFESCIENCES AG and)
EDWARDS LIFESCIENCES LLC,)
)
Plaintiffs,)
)
v.)
)
COREVALVE, INC. and,)
MEDTRONIC COREVALVE, LLC)
)
Defendants.)
_____)

C.A. No. 08-91-GMS

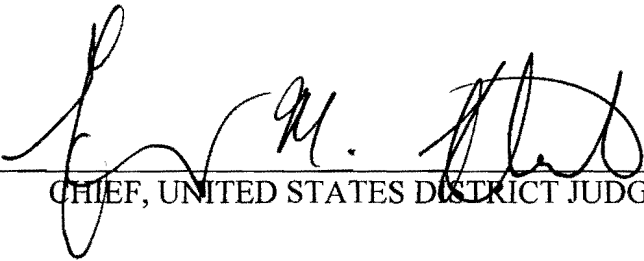
ORDER

For the reasons set forth in the court's Memorandum of this same date, IT IS HEREBY ORDERED that:

1. CoreValve's Renewed Motion for Judgment as a Matter of Law (D.I. 318) is DENIED in all respects.
2. CoreValve's Motion for a New Trial or Alternatively to Amend Judgment (D.I. 320) is DENIED in all respects.
3. Edwards' Motion for Attorney Fees (D.I. 339) is DENIED.
4. Edwards' Motion for Enhanced Damages Pursuant To 35 U.S.C. § 284 (D.I. 341) is DENIED.
5. Edwards' Motion for Prejudgment and Postjudgment Interest (D.I. 344) is GRANTED. The court awards Edwards prejudgment and postjudgment interest, based on the prevailing prime rate, compounded quarterly.
6. CoreValve's Motion to Stay Judgment Pending Post-Trial Motions (D.I. 348) is DENIED.

7. Edwards' Motion for Permanent Injunction, Accounting and Related Relief (D.I. 356) is GRANTED IN PART AND DENIED IN PART. Specifically, the court denies Edwards' request for a permanent injunction, but grants its request for an accounting with respect to the number of CoreValve Revalving System devices made, used, sold, offered for sale, imported or supplied in or from the United States and corresponding revenue from March 16, 2010 through the date of the order.¹
8. CoreValve's Local Rule 7.1.3(c)(2) Motion to Strike (D.I. 391) is DENIED.
9. CoreValve's Motion to Supplement Court Record (D.I. 417) is DENIED.

Dated: February 7, 2011


CHIEF, UNITED STATES DISTRICT JUDGE

¹ Within ten (10) days from the date of this order, CoreValve shall provide Edwards with an accounting of the number of CoreValve Generation 3 THV devices made, used, sold, offered for sale, imported or supplied in or from the United States and corresponding revenue from March 16, 2010 through the date of the order, in a format acceptable to Edwards, from which Edwards can calculate its monetary damages not accounted for in the April 1, 2010 jury verdict or other post-judgment orders by the court. Within forty (40) days from the date of this order, the parties shall file a joint statement stating the amount of pre- and post-judgment monetary damages and interest attributable to this accounting. In accordance with the memorandum and order of this date, interest shall be set at the prime rate compounded quarterly, and the order for accounting is made with the understanding that CoreValve remains liable in this case only for the type of infringement that was the subject of the jury's verdict. *See* Memorandum at 29, note 16.